Index to Volume XXXIV

March 1909 --- August 1909

A

Accidents in Foundries..... 25
Advance Radiator Co., Sash Weight Molding Machine 48
Air Furnace Construction..... 232
Air Pressure Table. Data Sheet No. 48, August, 1909.
Air Separator, The Pangborn, Modern.. 213
Air Velocity Table. Data Sheet No. 47, August, 1909.
Allis-Chalmers Co. Method of Molding 90-ton Engine Frames..... 99
Alloy, Aluminum, for Match Plates.... 53
Alloy, A New, for Bearings and Bushings 239
Alloy for Bearings..... 83
Alloy for Hardening Gray Iron..... 62
Alloys for Machine Bearings..... 32
Alloy for Purifying Metals With a Copper Base 212
Alloys for Use in the Brass Foundry.. 11
Alloy, Titanium, in Car Wheels..... 105
Allyne Brass Foundry Co., Alloy for Purifying Metals 212
Aluminum Alloy for Match Plates..... 53
Aluminum Flux 16
Aluminum, Hints on Casting..... 16
Aluminum Scrap, Use of..... 16
American Brass Founders' Association Convention, Report of..... 163
American Foundrymen's Association, Report of Convention 163
Annealing Ovens for Malleable Work.. 7
Armor Plate, Cast Steel..... 83
Associated Foundry Foremen, Annual Meeting of..... 163
Automatic Sand Preparing Machine.... 264

B

Babbitt Metal, Sluggish..... 253
Band Saw, Motor Driven..... 50
Bearings, A New Alloy for..... 239
Bearings, Alloy for..... 83
Bearings, Machine, Alloys for..... 32
Bearing Metals, Mixture for and Method of Melting 6
Bedstead Castings 263
Bellows, Foundry 97
Berkshire Mfg. Co. Berkshire Jr. Hand Squeezer Molding Machine..... 268
Berkshire Mfg. Co. Combined Hand Squeezer and Pattern Drawing Molding Machine 94
Blacking Mixer, The Cleveland..... 157
Blast Pipe, Diameters of and Blower Outlets, Data Sheet No. 40, April, 1909
Blast Pressure, High or Low..... 133
Blower Outlets and Diameters of Blast Pipe Data Sheet No. 40, April, 1909
Bolster, Cast Steel, Method of Molding 235
Book Reviews..... 43, 93, 211
Borings, Cast Iron, Use of..... 261
Box, Alfred & Co., A New Electric Hoist 47
Brass Castings, Ornamental, for Cash Registers 271
Brass Castings, Repairing..... 242
Brasses, Heavy Mill, Mixtures for..... 301
Brass, Furnaces, Battery of 12 Fisher... 310
Brass Ingots, Manufacture of..... 179
Brass Melting Difficulties 37
Brass Melting, Interesting Notes on.... 230
Brass Mixture for Separator Bushings.... 10
Brass Turnings, Melting, in an Oil Furnace 208
Brass Valve Core Shop Practice..... 129
Brass Valve Mixtures.....20, 60, 262
Brass Valve Mixtures, Interesting Experiments With 121
British Foundrymen's Association..... 93
British Foundrymen's Association Convention, Arrangements for..... 175
British Foundrymen's Convention..... 308
Bronze, Manganese 135
Bronze, Melting 257
Bronze Tablet for Fort McHenry..... 209
Buch's A., Sons Co., Gravity Molding Machine 44
Buch's, A., Sons Co., Portable Jarring and Squeezer Molding Machine..... 217
Buffalo Forge Co. Large Shipment of Fans in Record Time..... 265
Buck's Roll-Up Device for Molding Stove Plate 53
Burner for Heating Large Ladles..... 267
Burner, Oil, for Drying Molds..... 96
Burner, Oil, Lighting Cupolas with..... 47
Bushings, A New Alloy for..... 239
Bushings, Separator, Brass Mixture for.. 10

C

Car Wheels, Titanium Alloy for..... 105
Cast Iron Borings, The Use of..... 261
Cast Iron, Permanent Molds, Effect on.. 302
Cast Iron Pipe..... 294
Cast Iron Pots for Melting Lead..... 38
Cast Iron, Influence of Gases on the Structure of 70
Cast Iron, Relation of Shrinkage and Silicon in 16
Cast Iron Sanitary Ware, Enameled (I).. 1
Cast Iron Sanitary Ware, Enameled (II) 66
Cast Iron Sanitary Ware, Enameled (III) 125
Cast Iron Sanitary Ware, Enameled (111) 249
Cast Iron, Standard Methods for Determining the Constituents of. Data Sheet No. 37, March, 1909.
Cast Iron, Strength of..... 20
Cast Steel Armor Plate..... 83
Cast Steel Bolster, Method of Molding.. 235
Cast Steel, Cost of Manufacture..... 176
Cast Steel Swivels, Molding Large..... 134
Casting and Molding 90-ton Frames..... 99
Casting Rope Wheels, Difficulties Experienced in 305
Castings, Brass, Repairing 242
Castings, Bedstead 263
Castings, For Printing Presses..... 80
Castings, Iron, Chilled 124
Castings, Iron, Formulas for Finding the Weight of. Data Sheets Nos. 41 and 42, May, 1909.
Castings, Iron, Formulas for Finding the Weight of. Data Sheet No. 43, June, 1909.
Castings, Iron, Formulas for Finding the Weight of. Data Sheet No. 45, July, 1909.
Castings, Iron, Practical Value of Mechanical Standards for 201
Castings, Large, from a Small Cupola.... 133
Castings, Ornamental Brass for Cash Registers 271
Castings, Porous 211
Castings, Sand Burnt 65
Castings, Smooth, Facing for 239
Castings, Steam Cylinder, Production of. 297
Casting Steam Engine Cylinders..... 117
Casting Steam Fittings 127
Castings, Strong, Soft 248
Charges, Small, for the Cupola..... 282
Chicago Associated Foundry Foremen..... 6
Chilled Iron Castings 124
Cincinnati Convention of the American Foundrymen's Association 33-62
Coal, Pulverized, Foundry Use of..... 196
Coates Clipper Mfg. Co., A Flexible Shaft Polisher 97
Coke Consumption in the Cupola 89
Continuous Melting 261
Continuous Melting in the Westinghouse Foundry 183
Continuous Melting Problem 199
Convention of the American Brass Founders' Association, Report of..... 163
Convention of the American Foundrymen's Association 142
Convention of the American Foundrymen's Association, Report of 163
Converter Steel Castings 263
Converter Steel Foundry 225
Cope, Weight Required to Resist the Pressure of Molten Metal and Pressure Exerted on Mold. Data Sheet No. 45, July, 1909.
Core Box for Valve Cast Cores..... 6
Core Machine, Conveyor 221
Core Oven, Drawer Type..... 161
Core Oven, Return Draft..... 256
Cores and Coremaking..... 279
Cost of Installing and Operating Sand Blast Equipment 63
Cost of Steel Making in Foundries..... 176
Cost System, Foundry, A Simple..... 287
Crane, Scale, Electric Traveling..... 221
Crucible Furnace, Gyrating Flame..... 49
Crucible Making, Graphite for..... 51
Crucibles, Clay-Lined 294
Cupola, Coke Consumption in..... 89
Cupola Flux, Limestone as..... 135
Cupolas, Lighting with an Oil Burner..... 47
Cupola Operations 65
Cupola, Small Charges for..... 282
Curtis & Co. Mfg. Co., Curtis Mumford Overhead Molder 219
Curtis & Co. Mfg. Co., Open Hopper Sand Blast 47
Curtis-Mumford Overhead Molder 219
Cylinder Castings, Steam, Production of. 297
Cylinder Mixtures 263
Cylinders, Locomotive, Molding..... 26
Cylinders, Semi-Steel Mixtures for..... 117
Cylinders, Steam Engine, Casting..... 117

D

Detroit Lubricator Co. Methods of Molding and Making Cores..... 129
Diameters of Blast Pipe and Blower Outlets. Data Sheet No. 40, April, 1909.
Diamond Clamp & Flask Co., Conveyor Core Machine 221
Distribution of Waste Losses..... 245
Difficulties with a Yellow Brass Mixture... 25
Difficulties with Yellow Brass..... 61

E

Economical Use of Scrap..... 244
Editorial—
A Sinister Record 152
A Unique and Charitable System..... 92
Decline in Pig Iron Production..... 42
Decline in Steel Casting Production..... 92
Foundrymen's Convention at Cincinnati. 210
Pouring Machine-Made Molds..... 42
The Foundrymen's Convention..... 152
Electrically Driven Pattern Shop Equipment 307
Electric Hoist 47
Electric Traveling Scale Crane..... 221
Enameled Cast Iron Sanitary Ware (I).. 1
Enameled Cast Iron Sanitary Ware (II). 66
Enameled Cast Iron Sanitary Ware (III). 125
Enameled Cast Iron Sanitary Ware (III). 249
Estep, Ezra, Stripping Plate for Bench Work 48
Exhibit of Foundry Supplies and Equipment, Cincinnati Convention..... 187
Exhibitors, Exposition, Foundry & Manufacturers' Supply Association..... 187

F

Facings, Foundry, Standardizing..... 193
Falls Rivet & Machine Co. Wadsworth Sand Mixing Machine..... 157
Ferguson & Lange Foundry Co., Novel Power Ramming Molding Machine..... 184
Fiftieth Anniversary of P. H. & F. M. Roots Co. 153
Fittings, Steam, Method of Casting..... 127
Flask, Rolled Steel..... 49
Flask, Steel, for Floor Work..... 97
Fluorspar for Foundry Use..... 243
Flux, Aluminum 16
Flux, Cupola, Limestone as..... 210
Flywheels, Large, Floor Molded..... 283
Follow-Board, A Large..... 50
Formulas for Finding the Weight of a Hollow Iron Sphere and a Body of Rammed Sand, Data Sheet No. 44, June, 1909.
Formulas for Finding the Weight Required on a Cope to Resist the Pressure of Molten Metal and the Pressure Exerted on the Mold. Data Sheet No. 45, July, 1909.
Formulas for Finding the Weight of Iron Castings. Data Sheets Nos. 41 and 42, May, 1909.
Formulas for Finding the Weight of Iron Castings. Data Sheet No. 43, June, 1909.
Formulas for Finding the Weight of Iron Castings. Data Sheet No. 46, July, 1909.
Foundry Facings, Standardizing..... 193
Foundry & Manufacturers' Supply Association, Report of Annual Meeting.... 187
Foundry Lighting and Ventilation..... 269
Foundry Production Tally, A Simple..... 287

Index to Volume XXXIV

March 1909 --- August 1909

A

Accidents in Foundries..... 25
Advance Radiator Co., Sash Weight Molding Machine 48
Air Furnace Construction..... 232
Air Pressure Table. Data Sheet No. 48, August, 1909.
Air Separator, The Pangborn, Modern.. 213
Air Velocity Table. Data Sheet No. 47, August, 1909.
Allis-Chalmers Co. Method of Molding 90-ton Engine Frames..... 99
Alloy, Aluminum, for Match Plates.... 53
Alloy, A New, for Bearings and Bushings 239
Alloy for Bearings..... 83
Alloy for Hardening Gray Iron..... 62
Alloys for Machine Bearings..... 32
Alloy for Purifying Metals With a Copper Base 212
Alloys for Use in the Brass Foundry.. 11
Alloy, Titanium, in Car Wheels..... 105
Allyne Brass Foundry Co., Alloy for Purifying Metals 212
Aluminum Alloy for Match Plates..... 53
Aluminum Flux 16
Aluminum, Hints on Casting..... 16
Aluminum Scrap, Use of..... 16
American Brass Founders' Association Convention, Report of..... 163
American Foundrymen's Association, Report of Convention 163
Annealing Ovens for Malleable Work.. 7
Armor Plate, Cast Steel..... 83
Associated Foundry Foremen, Annual Meeting of..... 163
Automatic Sand Preparing Machine.... 264

B

Babbitt Metal, Sluggish..... 253
Band Saw, Motor Driven..... 50
Bearings, A New Alloy for..... 239
Bearings, Alloy for..... 83
Bearings, Machine, Alloys for..... 32
Bearing Metals, Mixture for and Method of Melting 6
Bedstead Castings 263
Bellows, Foundry 97
Berkshire Mfg. Co. Berkshire Jr. Hand Squeezer Molding Machine..... 268
Berkshire Mfg. Co. Combined Hand Squeezer and Pattern Drawing Molding Machine 94
Blacking Mixer, The Cleveland..... 157
Blast Pipe, Diameters of and Blower Outlets, Data Sheet No. 40, April, 1909
Blast Pressure, High or Low..... 133
Blower Outlets and Diameters of Blast Pipe Data Sheet No. 40, April, 1909
Bolster, Cast Steel, Method of Molding 235
Book Reviews..... 43, 93, 211
Borings, Cast Iron, Use of..... 261
Box, Alfred & Co., A New Electric Hoist 47
Brass Castings, Ornamental, for Cash Registers 271
Brass Castings, Repairing..... 242
Brasses, Heavy Mill, Mixtures for..... 301
Brass, Furnaces, Battery of 12 Fisher... 310
Brass Ingots, Manufacture of..... 179
Brass Melting Difficulties 37
Brass Melting, Interesting Notes on.... 230
Brass Mixture for Separator Bushings.... 10
Brass Turnings, Melting, in an Oil Furnace 208
Brass Valve Core Shop Practice..... 129
Brass Valve Mixtures.....20, 60, 262
Brass Valve Mixtures, Interesting Experiments With 121
British Foundrymen's Association..... 93
British Foundrymen's Association Convention, Arrangements for..... 175
British Foundrymen's Convention..... 308
Bronze, Manganese 135
Bronze, Melting 257
Bronze Tablet for Fort McHenry..... 209
Buch's A., Sons Co., Gravity Molding Machine 44
Buch's, A., Sons Co., Portable Jarring and Squeezer Molding Machine..... 217
Buffalo Forge Co. Large Shipment of Fans in Record Time..... 265
Buck's Roll-Up Device for Molding Stove Plate 53
Burner for Heating Large Ladles..... 267
Burner, Oil, for Drying Molds..... 96
Burner, Oil, Lighting Cupolas with..... 47
Bushings, A New Alloy for..... 239
Bushings, Separator, Brass Mixture for.. 10

C

Car Wheels, Titanium Alloy for..... 105
Cast Iron Borings, The Use of..... 261
Cast Iron, Permanent Molds, Effect on.. 302
Cast Iron Pipe..... 294
Cast Iron Pots for Melting Lead..... 38
Cast Iron, Influence of Gases on the Structure of 70
Cast Iron, Relation of Shrinkage and Silicon in 16
Cast Iron Sanitary Ware, Enameled (I).. 1
Cast Iron Sanitary Ware, Enameled (II) 66
Cast Iron Sanitary Ware, Enameled (III) 125
Cast Iron Sanitary Ware, Enameled (111) 249
Cast Iron, Standard Methods for Determining the Constituents of. Data Sheet No. 37, March, 1909.
Cast Iron, Strength of..... 20
Cast Steel Armor Plate..... 83
Cast Steel Bolster, Method of Molding.. 235
Cast Steel, Cost of Manufacture..... 176
Cast Steel Swivels, Molding Large..... 134
Casting and Molding 90-ton Frames..... 99
Casting Rope Wheels, Difficulties Experienced in 305
Castings, Brass, Repairing 242
Castings, Bedstead 263
Castings, For Printing Presses..... 80
Castings, Iron, Chilled 124
Castings, Iron, Formulas for Finding the Weight of. Data Sheets Nos. 41 and 42, May, 1909.
Castings, Iron, Formulas for Finding the Weight of. Data Sheet No. 43, June, 1909.
Castings, Iron, Formulas for Finding the Weight of. Data Sheet No. 45, July, 1909.
Castings, Iron, Practical Value of Mechanical Standards for 201
Castings, Large, from a Small Cupola.... 133
Castings, Ornamental Brass for Cash Registers 271
Castings, Porous 211
Castings, Sand Burnt 65
Castings, Smooth, Facing for 239
Castings, Steam Cylinder, Production of. 297
Casting Steam Engine Cylinders..... 117
Casting Steam Fittings 127
Castings, Strong, Soft 248
Charges, Small, for the Cupola..... 282
Chicago Associated Foundry Foremen..... 6
Chilled Iron Castings 124
Cincinnati Convention of the American Foundrymen's Association 33-62
Coal, Pulverized, Foundry Use of..... 196
Coates Clipper Mfg. Co., A Flexible Shaft Polisher 97
Coke Consumption in the Cupola 89
Continuous Melting 261
Continuous Melting in the Westinghouse Foundry 183
Continuous Melting Problem 199
Convention of the American Brass Founders' Association, Report of..... 163
Convention of the American Foundrymen's Association 142
Convention of the American Foundrymen's Association, Report of 163
Converter Steel Castings 263
Converter Steel Foundry 225
Cope, Weight Required to Resist the Pressure of Molten Metal and Pressure Exerted on Mold. Data Sheet No. 45, July, 1909.
Core Box for Valve Cast Cores..... 6
Core Machine, Conveyor 221
Core Oven, Drawer Type..... 161
Core Oven, Return Draft..... 256
Cores and Coremaking..... 279
Cost of Installing and Operating Sand Blast Equipment 63
Cost of Steel Making in Foundries..... 176
Cost System, Foundry, A Simple..... 287
Crane, Scale, Electric Traveling..... 221
Crucible Furnace, Gyrating Flame..... 49
Crucible Making, Graphite for..... 51
Crucibles, Clay-Lined 294
Cupola, Coke Consumption in..... 89
Cupola Flux, Limestone as..... 135
Cupolas, Lighting with an Oil Burner..... 47
Cupola Operations 65
Cupola, Small Charges for..... 282
Curtis & Co. Mfg. Co., Curtis Mumford Overhead Molder 219
Curtis & Co. Mfg. Co., Open Hopper Sand Blast 47
Curtis-Mumford Overhead Molder 219
Cylinder Castings, Steam, Production of. 297
Cylinder Mixtures 263
Cylinders, Locomotive, Molding..... 26
Cylinders, Semi-Steel Mixtures for..... 117
Cylinders, Steam Engine, Casting..... 117

D

Detroit Lubricator Co. Methods of Molding and Making Cores..... 129
Diameters of Blast Pipe and Blower Outlets. Data Sheet No. 40, April, 1909.
Diamond Clamp & Flask Co., Conveyor Core Machine 221
Distribution of Waste Losses..... 245
Difficulties with a Yellow Brass Mixture... 25
Difficulties with Yellow Brass..... 61

E

Economical Use of Scrap..... 244
Editorial—
A Sinister Record 152
A Unique and Charitable System..... 92
Decline in Pig Iron Production..... 42
Decline in Steel Casting Production..... 92
Foundrymen's Convention at Cincinnati. 210
Pouring Machine-Made Molds..... 42
The Foundrymen's Convention..... 152
Electrically Driven Pattern Shop Equipment 307
Electric Hoist 47
Electric Traveling Scale Crane..... 221
Enameled Cast Iron Sanitary Ware (I).. 1
Enameled Cast Iron Sanitary Ware (II). 66
Enameled Cast Iron Sanitary Ware (III). 125
Enameled Cast Iron Sanitary Ware (III). 249
Estep, Ezra, Stripping Plate for Bench Work 48
Exhibit of Foundry Supplies and Equipment, Cincinnati Convention..... 187
Exhibitors, Exposition, Foundry & Manufacturers' Supply Association..... 187

F

Facings, Foundry, Standardizing..... 193
Falls Rivet & Machine Co. Wadsworth Sand Mixing Machine..... 157
Ferguson & Lange Foundry Co., Novel Power Ramming Molding Machine..... 184
Fiftieth Anniversary of P. H. & F. M. Roots Co. 153
Fittings, Steam, Method of Casting..... 127
Flask, Rolled Steel..... 49
Flask, Steel, for Floor Work..... 97
Fluorspar for Foundry Use..... 243
Flux, Aluminum 16
Flux, Cupola, Limestone as..... 210
Flywheels, Large, Floor Molded..... 283
Follow-Board, A Large..... 50
Formulas for Finding the Weight of a Hollow Iron Sphere and a Body of Rammed Sand, Data Sheet No. 44, June, 1909.
Formulas for Finding the Weight Required on a Cope to Resist the Pressure of Molten Metal and the Pressure Exerted on the Mold. Data Sheet No. 45, July, 1909.
Formulas for Finding the Weight of Iron Castings. Data Sheets Nos. 41 and 42, May, 1909.
Formulas for Finding the Weight of Iron Castings. Data Sheet No. 43, June, 1909.
Formulas for Finding the Weight of Iron Castings. Data Sheet No. 46, July, 1909.
Foundry Facings, Standardizing..... 193
Foundry & Manufacturers' Supply Association, Report of Annual Meeting.... 187
Foundry Lighting and Ventilation..... 269
Foundry Production Tally, A Simple..... 287

Furnace, Air, Construction, Notes on.... 232
Furnace, Crucible, Gyrating Flame..... 49
Furnace, Gray Iron, Operation of..... 247
Furnace, Open-Hearth, Small..... 181
Furnace, Tilting Coke Fired, Crucible... 214
Furnaces, Brass, Battery of 12 Fisher... 310

G

Gear, Cast Tooth, Making a, from a Blank Pattern 64
General Industrial Notes.....51-98-162-223-270
Gluing Stand for Segment Work..... 296
Goggles, Mechanics' 266
Graphical Method of Obtaining Metal Contractions 79
Graphite for Crucible Making..... 51
Graphite, Mining of, in Ceylon..... 258
Gray Iron, Alloy for Hardening..... 62
Gray Iron Furnace, Operation of..... 247
Gravity Molding Machine..... 44

H

Hammer, Chipping, Pittsburg Pneumatic. 46
Hauck Mfg. Co., Burner for Heating Ladles 267
Hauck Mfg. Co., Drying Molds with an Oil Burner 96
Hauck Mfg. Co., Lighting Cupolas with an Oil Burner 47
Heat, Waste 209
Herman Pneumatic Machine Co., Ladle Carrier 311
High and Low Pressures for the Sand Blast 23
Hinged Match Plates for Stove Work.... 53
Hints on Casting Aluminum..... 16
Hoe, R., & Co., Description of Foundry 80
Hoist, Electric 47
"Homogen," A New Alloy for Purifying Metals 212
Hooven-Owens-Rentschler Co., Method of Molding and Casting Large Flywheels. 283
Hose for Sand Blasting, Effect of Sand and Oil on..... 22

I

Independent Foundry Co., Description of 71
Indiana Steel Co., Description of Foundry 147
Influence of Gases on the Structure of Cast Iron 70
Ingots, Brass, Manufacture of..... 179
Interesting Experiments with Brass Valve Mixtures 121
Interesting Explanation of the Cause of Foaming Slag 229
Interesting Tests of Steel Castings..... 17
Institute of Metals, Second Meeting of... 24
Iron Market, Features of Pacific Coast.. 90

J

Jarring and Hinged Molding Machine.... 39

K

Keuffel & Esser, A Handy Shrinkage Rule 310
Killing's, E., Molding Machine Works, Universal Roll Over Molding Machines 215
Kroeschell Bros. Co., Gyrating Flame Crucible Furnace 49

L

Ladle Carrier 311
Ladles, Burner for Heating Large..... 267
Large Shipment of Fans in Record Time 265
Leeds & Northrup Co., New Type of Indicating Pyrometer 215
Limestone as a Cupola Flux.....135-210
London Emery Works, Automatic Sand Preparing Machine 264
Losses, Waste, Distribution of..... 245
Lupton's, David, Sons Co., Foundry Lighting and Ventilation..... 269

M

Machine, Core, Conveyor..... 221
Machine, Sand Mixing..... 216
Making a Cast Tooth Gear from a Blank Pattern 64
Making a Large Combination Mold..... 109
Making Molding Joints and Partings.... 86
Malleable Annealing Process, Description of 84
Malleable Castings, Production of (XII) 7
Malleable Castings, Production of (XIII) 84
Malleable Castings, Production of (XIV) 295
Malleable Scrap and Sash Weights..... 5
Malleable Work, Annealing Department Practice 7
Manganese Bronze 135
Manufacture of Steel for Castings..... 30
Match Plates, Hinged for Stove Work... 53
Mathematics, Practical, For the Foundryman (I) 119
Meeting of the Associated Foundry Foremen, Annual Report of..... 163
Meeting of Foundry & Manufacturers' Supply Association, Annual..... 187
Melting Brass in an Oil Furnace..... 261
Melting, Brass, Interesting Notes on.... 230
Melting Brass Turnings in the Oil Furnace 208
Melting Bronze 257
Melting, Continuous, in the Westinghouse Foundry 183
Melting, Continuous, Problem..... 199
Melting Iron for Sash Weights..... 73
Melting, Method of, Bearing Metals..... 6
Melting, Poor 116
Mesta Machine Co., Description of Pattern Shop 307
Metal, Babbitt, Sluggish..... 253
Metal Contractions, Graphical Method of Obtaining 79
Mesta Machine Co., Method of Molding 80-ton Engine Frames..... 122
Mill, Tumbling 222
Milwaukee Foundry Foremen..... 128
Mining of Graphite in Ceylon..... 258
Mixture for Bearing Metals and Method of Melting 6
Mixture for Propellers..... 220
Mixtures, Brass Valve.....20-60-262
Mixtures, Brass Valve, Interesting Experiments with 121
Mixtures for Heavy Mill Brasses..... 301
Mixture, Yellow Brass, Difficulties with.. 25
Mixtures for White Metal Patterns..... 244
Mixtures, Semi-Steel, for Cylinders..... 117
Mixtures, Solder 11
Mixtures, Steam Cylinder..... 263
Modern Pacific Coast Foundry..... 71
Modern Pattern Shop Layout..... 106
Modern Steel Works' Foundry..... 147
Mold, Making a Large Combination..... 109
Mold, Permanent, Use of..... 203
Molds, Drying with an Oil Burner..... 96
Molds for Bath Tubs..... 125
Molds, Permanent, Effect on Cast Iron.. 302
Molder, Overhead, Curtis-Mumford..... 219
Molding a Cast Steel Bolster..... 235
Molding and Casting 90-ton Frames..... 99
Molding Large Cast Steel Swivels..... 134
Molding Large Flywheels on the Floor... 283
Molding Locomotive Cylinders..... 26
Molding Machine, A Novel Power Ramming 184
Molding Machine, Berkshire Jr., Hand Squeezer 268
Molding Machine, Combined Hand Squeezer and Pattern Drawing..... 94
Molding Machine, Gravity..... 44
Molding Machine, Jarring and Hinged.. 39
Molding Machine, Jarring, The Murphy. 266
Molding Machine-Made Plow Points..... 34
Molding Machine, Portable Jarring and Squeezer 217
Molding Machine, Power Ramming Rock-Over 154
Molding Machine, Rock-Over Jolt..... 220
Molding Machine, Sash Weight..... 48
Molding Machine, Special, for Molding Manhole Rings 234
Molding Machines, Universal Roll-Over.. 215
Molding Machines vs. Hand Molding.... 240
Molding Joints and Partings..... 86
Molding 80-ton Engine Frames..... 122
Monel Metal 141
Molding Sand 286

N

National Cash Register Co., Description of Foundry 271
National Electroplaters' Association..... 108
Nozzles for Sand Blasting, Size and Construction of 22

O

Obermayer, S., Co., Steel Spout Foundry Bellows 97
Obituary 48-261
Oliver Machinery Co., Wadkin Mechanical Woodworker 159
Operation of the Gray Iron Furnace.... 247
Ornamental Brass Castings for Cash Registers 271
Osborn Mfg. Co., "Sivquick" Riddle..... 161
Osborn Mfg. Co., Rock-Over Jolt Molding Machine 220

P

Pacific Coast Iron Market, Features of.. 90
Pangborn, Thomas W., Modern Air Separator 213
Partings and Mold Joints, Making..... 86
Pattern, Bath Tub, Method of Filing... 249
Patterns for Bath Tubs..... 66
Pattern Plate Process, Reversible..... 74
Patterns, Repairing 282
Pattern Shop Equipment, Electrically-Driven 307
Pattern Shop Layout, Modern..... 106
Pattern Storage System 90
Patterns, White Metal, Mixtures for..... 244
Permanent Molds, Effect on Cast Iron... 302
Permanent Mold, Use of..... 203
Personal 43-93-153-211-260-312
Philadelphia Foundrymen's Association... 79
Pig Iron, Foundry, Standard Specifications for Buying 174
Pig Iron, Sampling for Analysis..... 135
Pig Iron Specifications, Standard..... 105
Pipe, Cast Iron..... 294
Pittsburg Foundrymen's Association....121-257
Pittsburg Pneumatic Co., Chipping Hammer 46
Plow Points, Machine-Made, Method of Molding 34
Porous Castings 211
Power-Ramming Molding Machine..... 184
Polisher, Shaft, A Flexible..... 97
Polygons, Table of Dimensions of. Data Sheet No. 39, April, 1909.
Practical Mathematics for the Foundryman (I) 119
Practical Value of Mechanical Standards for Iron Castings..... 201
Prevention of Warped Castings (III)... 13
Pridmore, Henry E., Power-Ramming, Rock-Over Molding Machine..... 154
Printing Presses, Castings for..... 80
Production of Malleable Castings (XII). 7
Production of Malleable Castings (XIII) 84
Production of Malleable Castings (XIV).. 295
Production of Steam Cylinder Castings.. 297
Propellers, Mixture for..... 220
Pulverized Coal, Foundry Use of..... 196
Pump Plungers, Three Methods of Molding 299
Pyrometer, New Type of Indicating..... 215
Pyrometers in Foundry Work, Use and Application of 137
Pyrometers, Use of, in Malleable Annealing Ovens 295

R

Relation of Shrinkage and Silicon in Cast Iron 16
Repairing Broken Brass Castings..... 242
Return Draft Core Oven..... 256
Repairing Patterns 282
Reversible Pattern Plate Process..... 74
Riddle, Osborn "Sivquick"..... 161
Roll-Up Device, Buck's, for Molding Stove Plate 53
Roof, Saw Tooth 311
Roots, P. H. & F. M., Co., Fiftieth Anniversary of 153
Rule, A Handy Shrinkage..... 310

S

Sampling Pig Iron for Analysis..... 135
Sand Blast, Curtis Open Hopper..... 47
Sand Blast, High and Low Pressures for 23
Sand Blast in the Foundry (IV)..... 22
Sand Blast in the Foundry (V)..... 63
Sand Burnt Castings..... 65
Sand Mixing Machine..... 216
Sand Mixing Machine Co., Sand Mixing Machine 216
Sand Mixing Machine, The Wadsworth.. 157
Sand, Molding, Properties of..... 286
Sand Preparing Machine, Automatic..... 264
Sand, Rammed, Formula for Finding the Weight of. Data Sheet No. 44, June, 1909.
Sash Weights and Malleable Scrap..... 5
Sash Weights, Melting Iron for..... 73
Sash Weight Molding Machine..... 48
Saw Tooth Roof for Foundries..... 311
Segment Work, Gluing Stand for..... 296
Scrap, Aluminum, Use of..... 16
Scrap, Economical Use of..... 244
Semi-Steel Mixtures for Cylinders..... 117
Shaft Polisher, A Flexible..... 97
Shrinkage Rule 310
Slag, Foaming, An Interesting Explanation of 229
Small Open-Hearth Furnace..... 181
Smith, J. D., Foundry Supply Co., Cleveland Blacking Mixer..... 157
Solder Mixtures 11
Sphere, Hollow Iron, Formula for Finding Weight of. Data Sheet No. 44, June, 1909.
Standard Methods for Determining the Constituents of Cast Iron. Data Sheet No. 37, March, 1909.
Standard Pig Iron Specifications..... 105
Standard Specifications for Buying Foundry Pig Iron..... 174
Steel Castings, Acid Open-Hearth Process 30
Steel Castings, Basic Open-Hearth Process 30
Steel Castings, Converter..... 263
Steel Castings, Converter Process..... 30
Steel Castings, Crucible Process..... 30
Steel Castings, Interesting Tests of..... 17
Steel Flask for Floor Work..... 97
Steel for Castings, Manufacture of..... 30
Steel Foundry, a Baby Converter..... 225
Steel Scrap, Use of, in the Cupola..... 255
Steel Works' Foundry, a Modern..... 147
Sterling Wheelbarrow Co. Rolled Steel Flask 49

Sterling Wheelbarrow Co. Steel Flask for Floor Work 97
Storage System, Pattern 90
Strength of Cast Iron..... 20
Stripping Plate for Bench Work..... 48
Swivels, Cast Steeel, Method of Molding. 134

T

Table, Air Pressure, Data Sheet No. 48, August, 1909.
Table, Air Velocity. Data Sheet No. 47, August, 1909.
Table of Dimensions of Polygons, Data Sheet No. 39, April, 1909..... —
Tabor Mfg. Co. Jarring and Hinged Molding Machine 39
Test Bars, Length of..... 193
Texas Co., Mechanics' Goggles..... 266
Three Methods of Molding Pump Plungers 299
Titanium Alloy in Car Wheels..... 105
To find the Length of a Chord to Divide the Circumference of a Circle into N Equal Parts. Data Sheet No. 38, March, 1909.
Trade Notes 50, 97, 132, 222, 268, 312
Trade Outlook 42, 92, 152, 262
Trade Publications....51, 96, 145, 222, 269, 312
Tri-City Foundry Foremen..... 62
Tropenas Steel Co. Description of Plant.. 225
Tubs, Bath, Pattern for..... 66
Tumbling Mill, A Large..... 222
Turnings, Brass, Melting in an Oil Furnace 208

U

Union Iron Works, Special Molding Machine for Manhole Rings..... 234
Use and Application of Pyrometers in Foundry Work 137
Use of Steel Scrap in the Cupola..... 255
Use of the Permanent Mold..... 203

V

Valve, Brass, Core Shop Practice..... 129
Valve, Brass, Mixtures.....20, 60, 262
Valve Case Cores, Core Box for..... 6

W

Wadkin Mechanical Woodworker..... 159
Wadsworth Sand Mixing Machine..... 157
Warped Castings, Prevention of (III).. 13
Waste Heat 209
Waterfall, Arthur T..... 175
West Side Iron Works, Motor Driven Band Saw 50
Wheels, Rope, Difficulties Experienced in Casting 305
Whiting Foundry Equipment Co. A Large Tumbling Mill..... 22
Whiting Foundry Equipment Co. Drawer Type Core Oven 161
Whiting Foundry Equipment Co. Electric Traveling Scale Crane 221
Wise, J. B. Tilting Coke Fired Crucible Brass Furnace..... 214
Woodworking Machine, Wadkin Mechanical 159

Y

Yellow Brass Difficulties 61
Yellow Brass Mixture, Difficulties with.. 25

Authors' Index---Volume XXXIV

March 1909 --- August 1909

B

Baxter, B. Economical Use of Scrap... 244
Betton, James M. The Sand Blast in the Foundry (IV) 22
Betton, James M. The Sand Blast in the Foundry (V) 63
Bragg, Chas. T. Interesting Notes on Brass Melting 230
Buchanan, J. F. Making Mold Joints and Partings 86

C

Carr, W. M. Converter Steel Castings.. 263
Carr, W. M. Small Open-Hearth Furnace 181
Cheney, F. R. Cores and Coremaking.. 279
Corse, W. M. Manufacture of Brass Ingots 179
Custer, Edgar Allen. Effect of Permanent Molds on Cast Iron..... 302
Custer, Edgar Allen. The Use of the Permanent Mold 203

E

Elliott, Geo. K. Brass Valve Mixtures.. 262
Estep, H. Cole. A Modern Pacific Coast Foundry 71

F

Farley, C. H. Sampling Pig Iron for Analysis 135
Fohs, F. Julius. Fluorspar for Foundry Use 243
Foster, Chas. E. Use and Application of Pyrometers in Foundry Work..... 137
Frohman, H. F. Standardizing Foundry Facings 193
Fry, C. J. Pattern Storage System..... 90

G

Griffin, M. E. Return Draft Core Oven 256

H

Hart, Jos. H. Alloys for Use in the Brass Foundry 11
Hemist, A. C. Practical Mathematics for the Foundryman (I) 119
Hoermann, A. E. High and Low Pressures for the Sand Blast..... 23
Horne, Emile B. Core Box for Valve Case Cores 6

K

Kane, W. H. Notes on Air Furnace Construction 232
Keep, W. J. Alloy for Hardening Gray Iron 62
Keep, W. J. Bedstead Castings..... 263
Keep, W. J. Cast Iron Fittings for Melting Lead 38
Keep, W. J. Cast Iron Pipe..... 294
Keep, W. J. Chilled Iron Castings..... 124
Keep, W. J. Cupola Operation..... 65
Keep, W. J. Facing for Smooth Castings 239
Keep, W. J. High or Low Blast Pressures 133
Keep, W. J. Large Castings from a Small Cupola 133
Keep, W. J. Length of Test Bars..... 193
Keep, W. J. Limestone as a Cupola Flux 135
Keep, W. J. Melting Iron for Sash Weights 73
Keep, W. J. Molding Sand 286
Keep, W. J. Poor Melting..... 116
Keep, W. J. Porous Castings..... 211
Keep, W. J. Relation of Shrinkage and Silicon in Cast Iron..... 16
Keep, W. J. Sand Burnt Castings..... 65
Keep, W. J. Sash Weights and Malleable Scrap 5
Keep, W. J. Strength of Cast Iron..... 20
Keep, W. J. Strong Soft Castings..... 248
Keep, W. J. Use of Cast Iron Borings 261
K. K. Alloy for Bearings..... 83
K. K. Brass Melting Difficulties..... 37
K. K. Brass Mixture for Separator Bushings 10
K. K. Brass Valve Mixtures..... 60
K. K. Difficulties with a Yellow Brass Mixture 25
K. K. Difficulties with Yellow Brass.... 61
K. K. Hints on Casting Aluminum..... 16
K. K. Interesting Experiments with Brass Valve Mixtures 121
K. K. Manganese Bronze 135
K. K. Melting Bronze 257
K. K. Mixture for Bearing Metals and Method of Melting..... 6
K. K. Mixtures for Heavy Mill Brasses 301
K. K. Mixture for Propellers..... 220
K. K. Sluggish Babbitt Metal..... 253
Kline, Geo. C. An Interesting Explanation of the Cause of Foaming Slag... 229
Knoeppel, C. E. A Simple Foundry Production Tally 287
Knoeppel, John E. Operation of the Gray Iron Furnace..... 247

M

McCartney, J. Temple. Three Methods of Molding Pump Plungers..... 299
McCaslin, H. J. Molding a Cast Steel Bolster 235
McCaslin, H. J. Molding Large Cast Steel Swivels 134
McGahey, C. R. Use of Steel Scrap in the Cupola 255
McVeen, Edward H. Melting Brass Turnings in an Oil Furnace..... 208
Meade, Richard K. Foundry Use of Pulverized Coal 196
Moldenke, Richard. Production of Malleable Castings (XII)..... 7
Moldenke, Richard. Production of Malleable Castings (XIII)..... 84
Moldenke, Richard. Production of Malleable Castings (XIV)..... 295
Moldenke, Richard. Small Charges for the Cupola 282
Muntz, Geo. Molding Machines vs. Hand Molding 240
Muntz, George. Reversible Pattern Plate Process 74

N

Nall, Jabez. Making a Cast Tooth Gear from a Blank Pattern..... 64
Nall, Jabez. Making a Large Combination Mold 109
Nall, Jabez. Prevention of Warped Castings (III) 13

O

Olsen, L. W. Distribution of Waste Losses 245

P

Porter, John J. The Practical Value of Mechanical Standards for Iron Castings 201
Probert, Richard K. Continuous Melting Problem 199

R

Ramp, Herbert M. The Production of Steam Cylinder Castings..... 297
Ramp, Paul R. Molding Locomotive Cylinders 26
Reidenbach, F. W. Waste Heat..... 209

S

Shed, N. W. Casting Steam Engine Cylinders 117
Shed, N. W. Limestone as a Cupola Flux 210
Shed, N. W. Steam Cylinder Mixtures... 263
Sleeth, S. D. Continuous Melting..... 261
Sleeth, S. D. Continuous Melting in the Westinghouse Foundry..... 183
Spencer, A. N. A Modern Pattern Shop Layout 106
Stoughton, Bradley. Cost of Steel Making in Foundries 176
Stoughton, Bradley. Manufacture of Steel for Castings 30

T

Tuttle, H. N. Graphical Method of Obtaining Metal Contractions..... 79
Tuttle, H. N. A Gluing Stand for Segment Work 296
Tuttle, H. N. Repairing Patterns..... 282

U

Underhill, Dillen. Enameled Cast Iron Sanitary Ware (I)..... 1
Underhill, Dillen. Enameled Cast Iron Sanitary Ware (II)..... 66
Underhill, Dillen. Enameled Cast Iron Sanitary Ware (III)..... 125
Underhill, Dillen. Enameled Cast Iron Sanitary Ware (III)..... 249

V

Viall, Ethan. Repairing Broken Brass Castings 242
Vickers, C. Brass Valve Mixtures..... 262

W

Wood, D. Melting Brass in an Oil Furnace 261

Data Sheets

Volume XXXIV

No. 37, March, 1909.—Standard Methods for Determining the Constituents of Cast Iron.
No. 38, March, 1909.—To Find the Length of a Chord to Divide the Circumference of a Circle into N Equal Parts.
No. 39, April, 1909.—Table of Dimensions of Polygons.
No. 40, April, 1909.—Diameters of Pipe for Lengths from 30 to 300 Feet. Blower Outlets Varying from 3 to 24 Inches.
Nos. 41 and 42, May, 1909.—Formulas for Finding the Weight of Iron Castings.
No. 43, June, 1909.—Formulas for Finding the Weight of Iron Castings.
No. 44, June, 1909.—Formulas for Finding the Weight of a Hollow Iron Sphere and a Body of Rammed Sand.
No. 45, July, 1909.—Formulas for Finding the Weight Required on a Cope to Resist the Pressure of Molten Metal and the Pressure Exerted on the Mold.
No. 46, July, 1909.—Formulas for Finding the Weight of Iron Castings.
No. 47, August, 1909.—Air Velocity Table.
No. 48, August, 1909.—Air Pressure Table.